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Entrez	PubMed	Nucleotide	Protein	Genome	Structure	PMC	Taxonomy	Books
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Display 3	levels	using filter:	none					

# Corynebacterium glutamicum

Taxonomy ID: 1718

Rank: species

Genetic code: Translation table 11

Other names:

synonym: Micrococcus glutamicus

synonym: Corynebacterium lilium

synonym: Brevibacterium divaricatum

synonym: Micrococcus maripuniceus

synonym: Brevibacterium thiogenitalis

synonym: Brevibacterium taipei

synonym: Brevibacterium seonmiso

synonym: Brevibacterium saccharolyticum

synonym: Brevibacterium glutamigenes

synonym: Brevibacterium chang-fua

synonym: 'Brevibacterium lactofermentum'

synonym: 'Corynebacterium lactofermentum'

synonym: Brevibacterium lactofermentum

synonym: Corynebacterium lactofermentum

Synonym: Corynebacterium lilium Lee and Good 1963

(Approved Lists 1980)

Brevibacterium divaricatum Su and Yamada synonym:

1960 (Approved Lists 1980)

"Micrococcus glutamicus" Kinoshita et al. synonym:

Corynebacterium glutamicum (Kinoshita et synonym:

al. 1958) Abe et al. 1967

includes: Microbacterium sp. ATCC 15283

includes: Brevibacterium sp. ATCC 19165

includes: Arthrobacter sp. NCIB 9666

# Lineage(full)

cellular organisms; Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae: Actinomycetales; Corynebacterineae; Corynebacteriaceae; Corynebacterium

Entrez records						
Database name	Subtree links	Direct links				
Nucleotide	7,014	6,984				
Protein	13,085	3,929				
Structure	4	4				
Genome	13	12				
Popset	2	2				
3D Domains	21	21				
PubMed Central	449	449				
Gene	3,162	88				
Taxonomy	2	1				

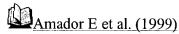
## **Comments and References:**

'Corynebacterium lactofermentum' = Corynebacterium glutamicum

Amador et al. (1999) propose the transfer of "Brevibacterium lactofermentum" to "Corynebacterium lactofermentum" on the basis of studies involving "B. lactofermentum" strains ATCC 13869 and DSM 20412. However, the ATCC catalogue of strains lists ATCC 13869 as C. glutamicum. Moreover, Liebl et al. (1991) have previously transferred "B. lactofermentum" strains DSM 20412 and DSM 1412 to C. glutamicum.

### Abe S et al. (1967)

Abe, S., Takayama, K., and Kinoshita, S. "Taxonomical studies on glutamic acid-producing bacteria." J. Gen. Appl. Microbiol. (1967) 13:279-301. [No PubMed record available.]



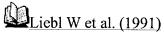
Amador, E., Castro, J.M., Correia, A., and Martin, J.F. "Structure and organization of the rrnD operon of 'Brevibacterium lactofermentum': analysis of the 16S rRNA gene." Microbiology (1999) 145:915-924.

#### Brevibacterium flavum & lactofermentum

"The Prokaryotes" (2nd edition) p. 1158 discusses the nomenclatural status of Brevibacterium flavum and Brevibacterium lactofermentum: "Their systematic classification has not been clarified but numerous data exist [citations listed below] indicating their close relatedness, if not identity, with Corynebacterium glutamicum: C. lilium, Brevibacterium flavum, B. lactofermentum, and B. divaricatum. Of the nomenclatural species B. flavum, B. lactofermentum, B. divaricatum, only B. divaricatum is included in the Approved Lists of Bacterial Names (Skerman et al., 1980), and none is a true member of the genus Brevibacterium. Therefore, data obtained with these species will be included with the discussion of the properties of Corynebacterium glutamicum." Abe et al. (1967) J. Gen. Appl. Microbiol. 13:279-301. Suzuki et al. (1981) Int. J. Syst. Bacteriol. 31:131-138. Minnikin et al. (1978) in "Coryneform bacteria" Academic Press, London.

## Fukuda H (1971) (Brevibacterium thiogenitalis)

Fukuda H. "Method for producing L-glutamic acid." U.S. Pat. 3,623,951 dated Nov. 30, 1971.



Liebl, W., Ehrmann, M., Ludwig, W., Schleifer, K.H. "Transfer of Brevibacterium divaricatum DSM 20297T, "Brevibacterium flavum" DSM 20411, "Brevibacterium lactofermentum" DSM 20412 and DSM 1412, and Corynebacterium glutamicum and their distinction by rRNA gene restriction patterns." Int. J. Syst. Bacteriol. (1991) 41:255-260.

# Oberreuter H et al. (unpublished 2001)

Oberreuter, H., Charzinski, J., and Scherer, S. "Infraspecific diversity of Brevibacterium linens, Corynebacterium glutamicum and Rhodococcus erythropolis as assessed by comparative partial 16S rDNA sequence analysis and Fourier-transform infrared (FT-IR) spectroscopy." Unpublished (as of 23 February 2001)

Okumura S et al. (1962) (Brevibacterium saccharolyticum)

Okumura, S. et al. "Studies on the L-glutamic acid fermentation. Part I. The new bacteria of the genus Brevibacterium isolated from the nature to produce L-glutamic acid." J. Agric. Chem. Soc. Jpn. (1962) 36:141-159. [No PubMed record available.]

## Skerman VBD et al. (1980) (Corynebacterium glutamicum)

Skerman, V.B.D., McGowan, V., and Sneath, P.H.A. (editors): "Approved lists of bacterial names." Int. J. Syst. Bacteriol. (1980) 30:225-420. [No PubMed record available.]

#### Su Y & Yamada K (1960)

Su, Y., and Yamada, K.: Bull. Agric. Chem. Soc. Japan (1960) 24:69-74. [No PubMed record available.]

# Zobell CE & Upham HC (1944) (Micrococcus maripuniceus)

Zobell, C.E., and Upham, H.C. "A list of marine bacteria including descriptions of sixty new species." Bull. Scripps Inst. Oceanogr. (1944) 5: 239-292. [No PubMed record available.]

# **External Information Resources (NCBI LinkOut)**

LinkOut	Subject	LinkOut Provider		
bnu	taxonomy/phylogenetic	Bacterial Nomenclature Up-to-date		
R-plasmid pAG1	DNA/protein sequence			
native 4.45 kb plasmid	DNA/protein sequence			
plasmid pAG3	DNA/protein sequence			
plasmid pAM330	DNA/protein sequence	NCBI Plasmid Genomes		
plasmid pCG2	DNA/protein sequence			
plasmid pGA2	DNA/protein sequence			
plasmid pTET3	DNA/protein sequence			
plasmid pXZ10142	DNA/protein sequence			
plasmid pXZ10145.1	DNA/protein sequence			

Note: Groups interested in participating in the LinkOut program should visit the LinkOut home page. A list of our current non-bibliographic LinkOut providers can be found here

**Disclaimer:** The NCBI taxonomy database is not an authoritative source for nomenclature or classification - please consult the relevant scientific literature for the most reliable information.

Comments and questions to info@ncbi.nlm.nih.gov

Credits: Mikhail Domrachev, Scott Federhen, Carol Hotton, Detlef Leipe, Vladimir Soussov, Richard Sternberg, Sean Turner.

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